AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A base station including a transmitter, the transmitter comprising:

means for receiving independent digital signals ('I', 'Q') to be transmitted;

a digital-to-analog converter (DAC) configured to ~~independently~~ convert the independent digital signals to analog signals;

an up-convertor to up-convert the analog signals to a single radio frequency signal; and

an analog channel filter configured to filter the up-converted analog signals, and ~~wherein the base station is characterized by:~~

a digital pre-equaliser filter coupled before the DAC, and configured to filter the received independent digital signals, wherein the digital pre-equaliser filter comprises a first digital filter and a second digital filter configured to apply complex coefficients to the received independent digital signals and adjust a combined response of the digital pre-equaliser filter and analog channel filter to a desired centre frequency of operation to provide asymmetric equalisation of the received independent digital signals.

2. (Previously presented) The base station of claim 1 wherein the first digital filter is constructed to provide a time reversed version of an impulse response of the analog channel filter to correct for non-linear phase response in the analog channel filter.

3. (Currently Amended) The base station ~~filter arrangement~~ of claim 1 wherein the second digital filter is configured to correct for an amplitude response from the analog channel filter.

4. (Previously presented) The base station of claim 1, wherein the digital pre-equaliser filter applies larger values of the complex coefficients to a real version of the received digital signal as compared to an imaginary version of the received signals.

5. (Previously presented) The base station of claim 1, wherein the base station is a Node B configured to operate in a TDD wireless communication system.

6. (Cancelled).

7. (Previously presented) The base station of claim 1, wherein the digital pre-equaliser filter is programmable.

8. (Cancelled).

9. (Currently amended) The base station ~~filter arrangement~~ of claim 1 [~~8~~] wherein a [~~the~~] largest complex coefficient of the digital pre-equaliser filter is ~~filter coefficients are~~ real.

10. (Currently amended) The base station of claim 1, wherein the analog channel filter has undesired roll-off in ~~the~~ a pass-band of ~~the~~ a desired signal to achieve a specified stop-band attenuation.

11-14. (Cancelled)

15. (Currently amended) A method for filtering in a wireless communication transmitter, the method comprising:

receiving independent digital signals ('I', 'Q') to be transmitted;

converting the independent digital signals to analog signals;

up-converting ~~un-converting~~ the analog signals to a single radio frequency; ~~and~~

filtering by an analog channel filter the up-converted analog signals; ~~signal, wherein the method is characterized by:~~

digital pre-equaliser filtering ~~, with a digital pre-equalisation filter,~~ the digital signals with a first digital filter and a second digital filter, by:

applying independent complex coefficients to the received independent digital signals and adjust a combined response of the digital pre-equaliser filter and analog channel filter to a desired centre frequency of operation to provide asymmetric equalisation of the received independent digital signals ~~, wherein the digital pre-equalisation filter comprises a first digital filter and a second digital filter configured to apply complex coefficients to the received digital signals~~.

16. (Currently Amended) The method of claim 15 wherein the digital pre-equaliser ~~digital~~ filtering comprises providing a time reversed version of an impulse response of the analog channel filter to correct for non-linear phase response in the analog channel filter.

17. (Currently Amended) The method of claim 15 wherein the digital pre-equaliser ~~digital~~ filtering comprises constructing a digital filter to correct for an amplitude response from the analog channel filter.

18. (Currently Amended) The method of claim 15, wherein the digital pre-equaliser filtering comprises applying larger values of the complex coefficients to a real version of the

received independent digital signals ~~signal~~ as compared to an imaginary version of the received independent digital signals.

19. (Previously presented) The method of claim 15, wherein the method is performed in a Node B in a UMTS wireless communication system.

20-30. (Cancelled)

31. (New) The method of claim 15 wherein a largest complex coefficient of the digital pre-equaliser filter is real.

32. (New) The method of claim 15, wherein the analog channel filter has undesired roll-off in a pass-band of desired signal to achieve a specified stop-band attenuation.

33. (New) A digital pre-equaliser filter arrangement for coupling to a digital-to-analog converter (DAC) configured to convert independent digital signals to analog signals in a transmitter that comprises:

an up-convertor to up-convert the analog signals to a single radio frequency signal; and

an analog channel filter configured to filter the up-converted analog signals;

wherein the digital pre-equaliser filter arrangement comprises:

means for receiving independent digital signals ('I', 'Q') to be transmitted;

a first digital filter and a second digital filter configured to filter the received independent digital signals and apply complex coefficients to the received independent digital signals and adjust a combined response of the digital pre-equaliser filter and analog channel filter to a desired centre frequency of operation to provide asymmetric equalisation of the received independent digital signals.

34. (New) The digital pre-equaliser filter arrangement of claim 33 wherein the first digital filter is constructed to provide a time reversed version of an impulse response of the analog channel filter to correct for non-linear phase response in the analog channel filter.

35. (New) The digital pre-equaliser filter arrangement of claim 33 wherein the second digital filter is configured to correct for an amplitude response from the analog channel filter.

36. (New) The digital pre-equaliser filter arrangement of claim 33 wherein a largest complex coefficient of the digital pre-equaliser filter is real.

37. (New) The digital pre-equaliser filter arrangement of claim 33 wherein the analog channel filter has undesired roll-off in a pass-band of desired signal to achieve a specified stop-band attenuation.